

Blood safety program in South Africa associated with decline in HIV-1 in blood donations JAMA and Archives Journals, 31 January, 2006

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A blood safety program in South Africa that included closing donor clinics in areas of high HIV prevalence is associated with a decrease in the prevalence of HIV in donated blood, according to study in the February 1 issue of JAMA.

South Africa is in the midst of an escalating human immunodeficiency virus (HIV)–AIDS pandemic, with an estimated 5.3 million people and 11.4 percent of the overall population infected, according to background information in the article. The South African National Blood Service (SANBS) collects more than 700,000 units of whole blood each year using internationally endorsed principles of voluntary donation, screening, and testing. The World Health Organization (WHO) estimates that 5 percent to 10 percent of HIV/AIDS cases continue to be acquired from infected blood transfusions. An analysis of South African donations in 1999 estimated the risk of HIV-1 infection at 3.4 per 100,000 donations. These data necessitated the development of a program to minimize this risk.

Anthon du P. Heyns, D.Sc., M.D., of the South African National Blood Service, Weltevreden Park, South Africa, and colleagues examined the prevalence of HIV-1 in blood donations before and after the implementation of new policies and estimated the residual risk for all blood donations following full program implementation. The researchers compared the prevalence of HIV-1 in blood donations collected from 1999 through 2000 with blood donations collected from 2001 through 2002 and estimated the incidence of HIV-1 in first-time donations and the residual risk for all donations in 2001-2002. All blood donors in the Inland region of the South African National Blood Service were analyzed.

The new policies included closing donor clinics in areas where HIV prevalence is high and programs targeting the youth and promoting repeat donation were initiated. Risk behavior education programs were developed for staff and donors. Structured donor interviews with direct oral questioning were institutionalized to ensure understanding of the self-exclusion questionnaire.

After implementation of the new policies, prevalence of HIV-1 in blood donations declined 50 percent, from 0.17 percent in 1999-2000 to 0.08 percent in 2001-2002 with a reduction seen in most demographic groups. This decrease was attributable to a reduction in the proportion of intermediate (4.9 percent to 3.3 percent) and high-risk (2.6 percent to 1.7 percent) donations and decreased prevalence in these categories. The prevalence of HIV-1 in first-time donors decreased by 45 percent. Donations from the majority black population declined from 6.6 percent to 4.2 percent.

"In the long term, we believe that education of blood donors will be a key factor for ongoing blood safety. There is a need for a structured program that is culturally attuned and presented in the multiple languages in common use. SANBS has been awarded funding under the President's Emergency Plan for AIDS Relief to work with the Centers for Disease Control and Prevention, the American Association of Blood Banks and the American Red Cross to this end. It will be important to link this initiative to a broader national HIV/AIDS program and to promote blood donation as part of a safe lifestyle to prevent the spread of HIV through blood transfusions and high risk behaviors," the authors conclude.